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09/858,192	05/14/2001	Winston W. Hodge	COAX 01.005	9642

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EXAMINER
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KOENIG, ANDREW Y

ART UNIT	PAPER NUMBER
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2611

DATE MAILED: 05/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/858,192

**Applicant(s)**

HODGE, WINSTON W.

**Examiner**

Andrew Y. Koenig

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 24-46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 24-46 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/27/03</u> . | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings were received on 06 August 2001. These drawings are acceptable.

### ***Priority***

2. This application repeats a substantial portion of prior Application No. 09/162,313, filed 28 September 1998, and adds and claims additional disclosure not presented in the prior application. Since this application names an inventor or inventors named in the prior application, it may constitute a continuation-in-part of the prior application. Should applicant desire to obtain the benefit of the filing date of the prior application, attention is directed to 35 U.S.C. 120 and 37 CFR 1.78.

### ***Specification***

The abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.

3. The application is objected to because of alterations which have not been initialed and/or dated as is required by 37 CFR 1.52(c). A properly executed oath or declaration which complies with 37 CFR 1.67(a) and identifies the application by application number and filing date is required. Please see the specification on page 8, line 11.

### ***Claim Objections***

4. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 1-23 of the pre-amendment (filed concurrently with the filing of the application) have been renumbered 24-46. Accordingly, the dependency of the dependent claims will be altered to maintain the dependencies (e.g. claim 25 will recite, "The head end network system of claim 24...").

On page 5 of the pre-amendment, the applicant discloses, "... please cancel all claims in the prior patent application." In order to provide a clearer record, originally filed claims 1-23 on pages 17-21 are cancelled, as per a conversation with Michael Kerr on 10 May 2005.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 24 and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,147,714 to Terasawa et al. (hereafter Terasawa).

Regarding claim 24, Terasawa teaches a transmission system as shown in figure 1, which reads on a head end network system, wherein the transmission system processes a plurality of video, program guide, logos, and other signals (col. 3, ll. 35-55), which equates to processing a plurality of digital data. Terasawa teaches a headend output via an antenna (307) that takes a plurality of modulation circuits (305-1 through 305-8) to create a composite wideband RF channel (col. 4, ll. 30-39), wherein the output is transmitted to integrated receiver decoders (col. 6, ll. 1-5), which equates to a plurality of set-top boxes. Transmission of each transponder over air equates to a plurality of analog channels, further, Terasawa teaches QPSK which is a digital modulation of the channels within each of the analog channels (col. 4, ll. 30-39). Further, Terasawa teaches a plurality of head-end encoders (housed within the transmission apparatus) (fig. 1, col. 3, ll. 22-24), wherein the encoders (col. 3, ll. 40-49, col. 3-4, ll. 66-21, col. 5, ll. 49-67) Terasawa teaches encoders configured for receiving video, audio and bit-map data (col. 3, ll. 25-57), which is received from broadcast stations and is inherently in a first protocol in order to properly encode the signals from a known format, wherein the encoder of Terasawa then converts the signals to MPEG (col. 3, ll. 25-49) and modulators (col. 4, ll. 31-39, col. 5, ll. 54-67). Accordingly, the encoders and modulators of Terasawa equate to the claimed headend encoders configured to generate said plurality of modulated channels, which occupies one of said plurality of analog channels.

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Further, Terasawa teaches a synthesizer circuit (fig. 1, label 306, col. 4, ll. 36-39, col. 6, ll. 1-5) which equates to a signal combiner coupled to each of the headend encoders configured to stack each of the outputs to generate the wideband signal.

Regarding claim 31, Terasawa teaches the digital data being digital video (col. 3, ll. 22-49).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 25-27 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,147,714 to Terasawa et al. (hereafter Terasawa) in view of U.S. Patent 5,987,518 to Gotwald.

Regarding claim 25, Terasawa teaches encoders for receiving data in first protocol and encoding the data to MPEG, but is silent on the first protocol being Internet Protocol. In analogous art, Gotwald teaches a single encoder comprising at least transport encapsulation (44), header addition (46), and modulation (62) for converting Ethernet and Internet protocols into MPEG protocol (col. 3, ll. 33-50, col. 4, ll. 29-38, col. 4, ll. 51-54), for the benefit of provide Internet access to the vast population using existing hardware thereby resulting in a lower cost (col. 1, ll. 59-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made

to modify Terasawa by encoding Internet protocol signals into MPEG as taught by Gotwald in order to use the existing hardware thereby resulting in a lower cost in that the system uses already existing hardware.

Regarding claim 26, Terasawa teaches encoders for receiving data in first protocol and encoding the data to MPEG, but is silent on the first protocol being Ethernet Protocol. In analogous art, Gotwald teaches a single encoder comprising at least transport encapsulation (44), header addition (46), and modulation (62) for converting Ethernet and Internet protocols into MPEG protocol (col. 3, ll. 33-50, col. 4, ll. 29-38, col. 4, ll. 51-54), for the benefit of provide Internet access to the vast population using existing hardware thereby resulting in a lower cost (col. 1, ll. 59-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Terasawa by encoding Ethernet protocol signals into MPEG as taught by Gotwald in order to use the existing hardware thereby resulting in a lower cost in that the system uses already existing hardware.

Regarding claim 27, Terasawa teaches that the second protocol is MPEG (col. 3, ll. 25-49).

Regarding claim 32, Terasawa teaches the digital data being video but is silent on the digital data comprising Internet data. In analogous art, Gotwald teaches that the digital data being of Internet Protocol (col. 3, ll. 33-50, col. 4, ll. 29-38, col. 4, ll. 51-54) and teaches the data to be Internet data (col. 5, ll. 1-5, col. 6, ll. 40-50). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was

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made to modify Terasawa by sending Internet data by as taught by Gotwald in order to enable cable operators to provide Internet access to users.

9. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,147,714 to Terasawa et al. (hereafter Terasawa) in view of U.S. Patent 6,305,019 to Dyer et al. (hereafter Dyer).

Regarding claim 28, Terasawa teaches encoding, but is silent on a return path demodulator receiving upstream information from set top boxes. In analogous art, Dyer teaches a return path demodulator for receiving upstream information from set top boxes (fig. 2, label 226, col. 9, ll. 11-21). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Terasawa by having a return path demodulator as taught by Dyer in order to receive data from subscribers for enabling additional services.

10. Claims 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,147,714 to Terasawa et al. (hereafter Terasawa) and U.S. Patent 6,305,019 to Dyer et al. (hereafter Dyer) in view of U.S. Patent 5,870,553 to Shaw et al. (Shaw).

Regarding claim 29, Terasawa teaches a program transmitting control device 308 that controls the switcher, but Terasawa and Dyer are silent on a server providing orientation by selecting the appropriate stream selected by the set top box. In analogous art, Shaw teaches a control server (14), which inherently provides orientation



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by selecting the appropriate stream selected by a set top box (col. 4, ll. 18-36) by locating the requested file from a server (col. 4, ll. 37-43). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Terasawa and Dyer by using a server to provide orientation by selecting the appropriate stream selected by a set top box as taught by Shaw in order to reduce the latency of a requested file thereby permitting the user to watch the video quicker.

Regarding claim 30, Terasawa and Dyer are silent on content servers having a video content having a plurality of video content formatted as digital data. Shaw teaches an archive server (16) which has plural video contents each with digital data (col. 4, ll. 37-60, col. 5-6, ll. 66-16). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Terasawa and Dyer by having a content server having a plurality of video content as taught by Shaw in order to provide on-demand functionalities to the user while reducing latency thereby enabling the user to access the requested material quicker.

11. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,147,714 to Terasawa et al. (hereafter Terasawa) and U.S. Patent 5,987,518 to Gotwald in view of U.S. Patent 6,490,274 to Kim.

Regarding claim 33, Terasawa and Gotwald teaches the use of video and Internet data, but are silent on telephony data. In analogous art, Kim teaches providing telephony through a cable television network using cable phones 208, 214, 246, and 248 as shown in figure 2 for having a telephone conversation using IP protocol (col. 4, ll.

1-18). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Terasawa and Gotwald by providing telephony data as taught by Kim in order to provide additional services, wherein the telephony service has advantages of low cost (Kim: col. 1, ll. 21-30).

12. Claims 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,147,714 to Terasawa et al. (hereafter Terasawa) in view of U.S. Patent 6,305,019 to Dyer et al. (hereafter Dyer) and U.S. Patent 5,870,553 to Shaw et al. (Shaw).

Regarding claim 34, Terasawa teaches a transmission system as shown in figure 1, which reads on a head end network system, wherein the transmission system processes a plurality of video, program guide, logos, and other signals (col. 3, ll. 35-55), which equates to processing a plurality of digital data. Terasawa teaches a headend output via an antenna (307) that takes a plurality of modulation circuits (305-1 through 305-8) to create a composite wideband RF channel (col. 4, ll. 30-39), wherein the output is transmitted to integrated receiver decoders (col. 6, ll. 1-5), which equates to a plurality of set-top boxes. Transmission of each transponder over air equates to a plurality of analog channels, further, Terasawa teaches QPSK which is a digital modulation of the channels within each of the analog channels (col. 4, ll. 30-39). Further, Terasawa teaches a plurality of head-end encoders (housed within the transmission apparatus) (fig. 1, col. 3, ll. 22-24), wherein the encoders (col. 3, ll. 40-49, col. 3-4, ll. 66-21, col. 5, ll. 49-67) Terasawa teaches encoders configured for receiving video, audio and bit-

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map data (col. 3, ll. 25-57), which is received from broadcast stations and is inherently in a first protocol in order to properly encode the signals from a known format, wherein the encoder of Terasawa then converts the signals to MPEG (col. 3, ll. 25-49) and modulators (col. 4, ll. 31-39, col. 5, ll. 54-67). Accordingly, the encoders and modulators of Terasawa equate to the claimed headend encoders configured to generate said plurality of modulated channels, which occupies one of said plurality of analog channels. Further, Terasawa teaches a synthesizer circuit (fig. 1, label 306, col. 4, ll. 36-39, col. 6, ll. 1-5) which equates to a signal combiner coupled to each of the headend encoders configured to stack each of the outputs to generate the wideband signal.

Terasawa is silent on a return path demodulator receiving upstream information from set top boxes. In analogous art, Dyer teaches a return path demodulator for receiving upstream information from set top boxes (fig. 2, label 226, col. 9, ll. 11-21). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Terasawa by having a return path demodulator as taught by Dyer in order to receive data from subscribers for enabling additional services.

Terasawa teaches a program transmitting control device 308 that controls the switcher, but Terasawa and Dyer are silent on a server providing orientation by selecting the appropriate stream selected by the set top box. In analogous art, Shaw teaches a control server (14), which inherently provides orientation by selecting the appropriate stream selected by a set top box (col. 4, ll. 18-36) by locating the requested file from a server (col. 4, ll. 37-43). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Terasawa and Dyer

by using a server to provide orientation by selecting the appropriate stream selected by a set top box as taught by Shaw in order to reduce the latency of a requested file thereby permitting the user to watch the video quicker.

Regarding claim 35, Terasawa and Dyer are silent on content servers having a video content having a plurality of video content formatted as digital data. Shaw teaches an archive server (16) which has plural video contents each with digital data (col. 4, ll. 37-60, col. 5-6, ll. 66-16). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Terasawa and Dyer by having a content server having a plurality of video content as taught by Shaw in order to provide on-demand functionalities to the user while reducing latency thereby enabling the user to access the requested material quicker.

Regarding claim 36, Terasawa teaches the digital data being digital video (col. 3, ll. 22-49).

13. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,147,714 to Terasawa et al. (hereafter Terasawa), U.S. Patent 6,305,019 to Dyer et al. (hereafter Dyer), and U.S. Patent 5,870,553 to Shaw et al. (Shaw) in view of U.S. Patent 5,987,518 to Gotwald.

Regarding claim 37, Terasawa teaches the digital data being video but is silent on the digital data comprising Internet data. In analogous art, Gotwald teaches that the digital data being of Internet Protocol (col. 3, ll. 33-50, col. 4, ll. 29-38, col. 4, ll. 51-54) and teaches the data to be Internet data (col. 5, ll. 1-5, col. 6, ll. 40-50). Therefore, it

would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Terasawa by sending Internet data by as taught by Gotwald in order to enable cable operators to provide Internet access to users.

14. Claims 38-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,147,714 to Terasawa et al. (hereafter Terasawa), U.S. Patent 6,305,019 to Dyer et al. (hereafter Dyer), U.S. Patent 5,870,553 to Shaw et al. (Shaw), U.S. Patent 5,987,518 to Gotwald in view of U.S. Patent 6,490,274 to Kim.

Regarding claim 38, Terasawa and Gotwald teaches the use of video and Internet data, but are silent on telephony data. In analogous art, Kim teaches providing telephony through a cable television network using cable phones 208, 214, 246, and 248 as shown in figure 2 for having a telephone conversation using IP protocol (col. 4, ll. 1-18). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Terasawa and Gotwald by providing telephony data as taught by Kim in order to provide additional services, wherein the telephony service has advantages of low cost (Kim: col. 1, ll. 21-30).

Regarding claim 39, Terasawa teaches encoders for receiving data in first protocol and encoding the data to MPEG, but is silent on the first protocol being Internet Protocol. In analogous art, Gotwald teaches a single encoder comprising at least transport encapsulation (44), header addition (46), and modulation (62) for converting Ethernet and Internet protocols into MPEG protocol (col. 3, ll. 33-50, col. 4, ll. 29-38, col. 4, ll. 51-54), for the benefit of provide Internet access to the vast population using

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existing hardware thereby resulting in a lower cost (col. 1, ll. 59-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Terasawa by encoding Internet protocol signals into MPEG as taught by Gotwald in order to use the existing hardware thereby resulting in a lower cost in that the system uses already existing hardware.

Regarding claim 40, Terasawa teaches encoders for receiving data in first protocol and encoding the data to MPEG, but is silent on the first protocol being Ethernet Protocol. In analogous art, Gotwald teaches a single encoder comprising at least transport encapsulation (44), header addition (46), and modulation (62) for converting Ethernet and Internet protocols into MPEG protocol (col. 3, ll. 33-50, col. 4, ll. 29-38, col. 4, ll. 51-54), for the benefit of provide Internet access to the vast population using existing hardware thereby resulting in a lower cost (col. 1, ll. 59-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Terasawa by encoding Ethernet protocol signals into MPEG as taught by Gotwald in order to use the existing hardware thereby resulting in a lower cost in that the system uses already existing hardware.

Regarding claim 41, Terasawa teaches that the second protocol is MPEG (col. 3, ll. 25-49).

15. Claims 42-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,147,714 to Terasawa et al. (hereafter Terasawa) in view of U.S. Patent

6,305,019 to Dyer et al. (hereafter Dyer), U.S. Patent 5,870,553 to Shaw et al. (Shaw), and U.S. Patent 5,987,518 to Gotwald.

Regarding claim 42, Terasawa teaches a transmission system as shown in figure 1, which reads on a head end network system, wherein the transmission system processes a plurality of video, program guide, logos, and other signals (col. 3, ll. 35-55), which equates to processing a plurality of digital data. Terasawa teaches a headend output via an antenna (307) that takes a plurality of modulation circuits (305-1 through 305-8) to create a composite wideband RF channel (col. 4, ll. 30-39), wherein the output is transmitted to integrated receiver decoders (col. 6, ll. 1-5), which equates to a plurality of set-top boxes. Transmission of each transponder over air equates to a plurality of analog channels, further, Terasawa teaches QPSK which is a digital modulation of the channels within each of the analog channels (col. 4, ll. 30-39). Further, Terasawa teaches a plurality of head-end encoders (housed within the transmission apparatus) (fig. 1, col. 3, ll. 22-24), wherein the encoders (col. 3, ll. 40-49, col. 3-4, ll. 66-21, col. 5, ll. 49-67) Terasawa teaches encoders configured for receiving video, audio and bit-map data (col. 3, ll. 25-57), which is received from broadcast stations and is inherently in a first protocol in order to properly encode the signals from a known format, wherein the encoder of Terasawa then converts the signals to MPEG (col. 3, ll. 25-49) and modulators (col. 4, ll. 31-39, col. 5, ll. 54-67). Accordingly, the encoders and modulators of Terasawa equate to the claimed headend encoders configured to generate said plurality of modulated channels, which occupies one of said plurality of analog channels. Further, Terasawa teaches a synthesizer circuit (fig. 1, label 306, col. 4, ll. 36-39, col. 6,

ll. 1-5) which equates to a signal combiner coupled to each of the headend encoders configured to stack each of the outputs to generate the wideband signal.

Terasawa teaches encoders for receiving data in first protocol and encoding the data to MPEG, but is silent on the first protocol being Internet Protocol. In analogous art, Gotwald teaches a single encoder comprising at least transport encapsulation (44), header addition (46), and modulation (62) for converting Ethernet and Internet protocols into MPEG protocol (col. 3, ll. 33-50, col. 4, ll. 29-38, col. 4, ll. 51-54), for the benefit of provide Internet access to the vast population using existing hardware thereby resulting in a lower cost (col. 1, ll. 59-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Terasawa by encoding Internet protocol signals into MPEG as taught by Gotwald in order to use the existing hardware thereby resulting in a lower cost in that the system uses already existing hardware. Terasawa teaches that the second protocol is MPEG (col. 3, ll. 25-49).

Terasawa is silent on a return path demodulator receiving upstream information from set top boxes. In analogous art, Dyer teaches a return path demodulator for receiving upstream information from set top boxes (fig. 2, label 226, col. 9, ll. 11-21). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Terasawa by having a return path demodulator as taught by Dyer in order to receive data from subscribers for enabling additional services.

Terasawa teaches a program transmitting control device 308 that controls the switcher, but Terasawa and Dyer are silent on a server providing orientation by



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selecting the appropriate stream selected by the set top box. In analogous art, Shaw teaches a control server (14), which inherently provides orientation by selecting the appropriate stream selected by a set top box (col. 4, ll. 18-36) by locating the requested file from a server (col. 4, ll. 37-43). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Terasawa and Dyer by using a server to provide orientation by selecting the appropriate stream selected by a set top box as taught by Shaw in order to reduce the latency of a requested file thereby permitting the user to watch the video quicker.

Regarding claim 43, Terasawa and Dyer are silent on content servers having a video content having a plurality of video content formatted as digital data. Shaw teaches an archive server (16) which has plural video contents each with digital data (col. 4, ll. 37-60, col. 5-6, ll. 66-16). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Terasawa and Dyer by having a content server having a plurality of video content as taught by Shaw in order to provide on-demand functionalities to the user while reducing latency thereby enabling the user to access the requested material quicker.

Regarding claim 44, Terasawa teaches the digital data being digital video (col. 3, ll. 22-49).

Regarding claim 45, Terasawa teaches the digital data being video but is silent on the digital data comprising Internet data. In analogous art, Gotwald teaches that the digital data being of Internet Protocol (col. 3, ll. 33-50, col. 4, ll. 29-38, col. 4, ll. 51-54) and teaches the data to be Internet data (col. 5, ll. 1-5, col. 6, ll. 40-50). Therefore, it

would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Terasawa by sending Internet data by as taught by Gotwald in order to enable cable operators to provide Internet access to users.

16. Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,147,714 to Terasawa et al. (hereafter Terasawa), U.S. Patent 6,305,019 to Dyer et al. (hereafter Dyer), U.S. Patent 5,870,553 to Shaw et al. (Shaw), and U.S. Patent 5,987,518 to Gotwald in view of U.S. Patent 6,490,274 to Kim.

Regarding claim 46, Terasawa and Gotwald teaches the use of video and Internet data, but Terasawa, Gotwald, Dyer, and Shaw are silent on telephony data. In analogous art, Kim teaches providing telephony through a cable television network using cable phones 208, 214, 246, and 248 as shown in figure 2 for having a telephone conversation using IP protocol (col. 4, ll. 1-18). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Terasawa, Gotwald, Dyer and Shaw by providing telephony data as taught by Kim in order to provide additional services, wherein the telephony service has advantages of low cost (Kim: col. 1, ll. 21-30).

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Y. Koenig whose telephone number is (703) 306-0399. The examiner can normally be reached on M-Th (7:30 - 6:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Grant, can be reached on (703) 305-4755. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ayk

A handwritten signature in black ink, appearing to read 'Andrew Y. Koenig', with a large, stylized loop at the end.